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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,515	12/04/2000	Herbert W. Sullivan	PA1671US	9494

22830 7590 09/27/2004

CARR & FERRELL LLP  
2200 GENG ROAD  
PALO ALTO, CA 94303

EXAMINER
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ANYA, CHARLES E

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/729,515

Applicant(s)

SULLIVAN ET AL.

Examiner

Charles E. Anya

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1 – 8 are pending in the current application.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1 – 8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,629,152 82 to Kingsburg et al [hereinafter Kingsburg, cited in the previous office action].**

4. As to claim 1, Kingsburg teaches a processing system for performing addition and subtraction ("...AFADDII...AFSUBII..." col. 9 Ln. 42 - 53) within limits upon a shared value comprising: means for performing a first uninterruptible operation upon the shared value (Mailbox Data Structure 70 Col. 7 Ln. 23 - 65, Col. 10 Ln. 26 - 27) stored in an affected reservation location, the first uninterruptible operation using an operand/means (see table 1; col. 9) for comparing a resulting value (original sampled value is checked to see if it indicates that the mailbox data structure is full; col. 10, lines 25 – 36) of the first uninterruptible operation stored in the affected reservation location to limit values

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(number of slots in the array of message slots; col. 7, lines 23 – 54) stored in limit locations (these indicators in the illustrative embodiment are variables that refer to memory locations containing the indicated data, they may also be pointers or other objects that relate to the indicated data; col. 7, lines 27 – 32), means for performing a second uninterruptible operation to restore the affected reservation location if the resulting value of the first uninterruptible operation is not within the limit values in the limit locations ("...Step 96...undo..." Col. 10 Ln. 33 - 40), means for reporting a failure if the resulting value of the first uninterruptible operation is not within the limit values in the limit locations ("...return (MBOX FULL NO-SLOTS ERROR)..." Col. 9 Ln. 1 - 15), means for performing a third uninterruptible operation to update an actual value location if the resulting value of the first uninterruptible operation is within the limit values in the limit locations (Step 104 Col. 10 Ln. 58 – 61; a set of indicators manipulatable by an atomic operation; col. 4, lines 26 – 36; Examiner notes that an atomic operation is an uninterruptible operation) and means for performing a fourth uninterruptible operation to update an unaffected reservation location if the resulting value of the first uninterruptible operation is within the limit values in the limit locations (Step 98 Col. 10 Ln. 41 - 50) and means for reporting a success if the resulting value of the first uninterruptible operation is within the limit values in the limit locations ("-.return SUCCESS.-" Col. 9 Ln. 1 - 15).

5. As to claim 2, Kingsburg teaches the first, second, third, and fourth uninterruptible operations as LOCK XADD operations ("...exchange and add (ADD)..." instruction..." Col. 9 Ln. 17 - 53).

6. As to claims 3, 5, 7 and 8, see the rejection of claim 1.

7. As to claims 4 and 6, see the rejection of claim 2.

### ***Response to Arguments***

8. Applicant's arguments filed April 19, 2004 have been fully considered but they are not persuasive.

Applicants argues (1) the step of checking whether a mailbox data structure is full in Kingsbury is not the same as applicant's step of comparing the resulting value with the limit values to check whether the resulting value is within the limit values [p. 9, lines 12 – 16] (2) the limit values in the limit locations can dynamically change to provide flexibility in checking the resulting value while Kingsbury has only one static value for the limit [p. 9, lines 16 – 18] (3) the changing of n\_present to indicate that a message is present in a message slot does not teach an uninterruptible operation [p. 10, lines 1 – 2] (4) MBOX\_FULL\_NO\_SLOTS\_ERROR is in response to the mailbox being full as opposed to being in response to a resulting value not being within limit values [p. 10, lines 5 – 7].

As to argument (1), Examiner respectfully disagrees and submits that the step of checking whether the mailbox data structure is full in Kingsbury reads on the applicant's step of comparing the resulting value with the limit values. The range of Kingsbury's array of message slots [col. 6, line 66 – col. 7, line 13; col. 7, lines 23 – 54] reads on

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applicant's limit values. Determining whether the mailbox data structure is full requires checking the `n_reserved` variable to determine if it is less than the size of the message slots array [slot N, Fig. 5] and greater than zero [slot 0, Fig. 5] since the size of the data structure can't be represented as a negative value. Therefore, determining whether the mailbox data structure is full in Kingsbury requires comparing the `n_reserved` value with the range [limit values] of the message array and this would read on applicant's limitations in the claims.

In response to argument (2), Examiner respectfully notes that the features upon which applicant relies (i.e., dynamically changing of limit locations) are not recited in the rejected claim(s). Examiner was unable to find support in the specification that suggests the limit locations can be dynamically changed. Even if there is support in the specification for dynamically changing of limit locations, limitations from the specification are not read into the claims. Since the claims do not define the limit values as dynamically adjustable, it is reasonable to read the limit values on static values because the claims do not preclude the examiner from doing so.

With regard to argument (3), examiner points applicant to col. 4, lines 26 – 36 of Kingsbury, which states that the set of indicators (including `n_present`) are manipulatable by an atomic operation. Examiner notes that atomic operations are uninterruptible.

As to argument (4), examiner respectfully disagrees and points applicant to TABLE 1 on col. 9. The `MBOX_FULL_NO_SLOTS_ERROR` message is in response to the resulting value [`old_n_reserved:=AFADD (destination_mailbox.n_reserved,1)`] not

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being within the limit values [if (old\_n\_reserved shows FULL), see response to argument (1) above with regards to determining if mailbox is full]. The MBOX\_FULL\_NO\_SLOTS\_ERROR message indicates mailbox being full after an attempt to add a message to the mailbox, and this also suggests the resulting value [old\_n\_reserved] is not within the limit values [range of message array].

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.



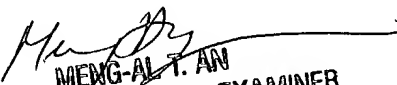
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3757. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles E. Anya  
Examiner  
Art Unit 2126

CEA  
September 21, 2004

  
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SUPERVISORY PATENT EXAMINER  
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